

Advancement Handbook for Aviation Warfare Systems Operator (HELICOPTER)

PREFACE

The purpose of the Advancement Handbook is to help you focus your preparation for Navy-wide advancement-in-rating examinations. The bibliographies (BIBs) together with this handbook form a comprehensive examination study package. Since this handbook provides skill and knowledge components for each paygrade of the Aviation Systems Operator (Helicopter) rating, it helps you concentrate your study on those areas that may be tested. This feature will help you get the most out of your study time.

Each page in Parts 1 through 4 of this Advancement Handbook presents general skill areas, specific skill areas, the knowledge factors associated with each skill area, the pertinent references required to perform each skill, and the types of subject areas that may be covered on the examination. The skill statements are cumulative; that is, you are responsible for the skills for the paygrade you are competing for, your present paygrade, and all paygrades below.

Although this handbook is very comprehensive, it cannot cover all the tasks performed in the rating. As a result, the advancement examinations may contain questions more detailed than described in the *"Exam Expectations"* section of the skill areas.

Remember that advancement competition is keen, so your keys to advancement include not only comprehensive advancement examination study but also sustained superior performance.

Prepared by

Naval Education and Training Professional
Development and Technology Center

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Part 1

Advancement Handbook for AWH3

Advancement Handbook for AWH3

General AWH <i>Skill Area</i>	General Aircrew Duties
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform aircraft preflight/in-flight/post-flight duties, weapons inspections, and logistical missions
Knowledge you should have to perform this skill:	<ul style="list-style-type: none"> • Perform foreign object damage (FOD) walkdowns • Perform aircraft preflight and post-flight inspections • Conduct hot seat transfer briefs • Perform night vision goggles (NVG) preflight inspections • Conduct NVG searches • Conduct searches (other than NVG) • Conduct NVG terrain avoidance • Conduct visual hazardous terrain avoidance • Perform preflight, in-flight, post-flight airborne tactical systems operational checks • Perform personal survival equipment preflight inspections • Conduct passenger briefs • Perform aircraft emergency drills • Prepare aircraft passenger manifests • Raise and lower recovery and assist securing and traversing (RAST) cables (Messenger, Probe, etc) • Monitor vertical replenishment (VERTREP) loads • Perform VERTREP load releases • Transfer passengers (military, civilian, etc) • Perform cargo hoist transfers • Transfer cargo • Service aircraft • Secure aircraft and aircraft equipment

	<ul style="list-style-type: none"> • Conduct in-flight vibration analysis • Perform on-station mission turnovers • Perform helicopter in-flight refueling (HIFR)
<p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p>	<ul style="list-style-type: none"> • AFTTP 3-1 VOLUME 24 • AFTTP 3-1 VOLUME 2 • CVIS • NAVAIR 01-H60BB-NFM-000 • NAVAIR 01-H60BB-NFM-010 • NAVAIR 01-H60BB-NFM-110/(C) • NAVAIR 01-H60CA-NFM-000 • NAVAIR 01-H60FB-NFM-010 • NAVAIR 00-80T-113 • NWP 3-22.5-HH60H VOLUME II • NWP 3-22.5 HH60H VOLUME I • NWP 3-04.1 • OPNAVINST 3710.7 (Series) • OPNAVINST 3750.6 • OPNAVINST 4790, Vol II (Series) • OPNAVINST 5100.19
<p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p>	<p>You can expect questions about the individual elements of aircraft preflight, such as FOD walk-down, aircraft servicing, survival gear checks and aircraft equipment preflight checks; in-flight equipment checks; emergency drills; aircraft weapons; logistic operations; and aircraft post-flight checks</p>

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General AWH <i>Skill Area</i>	Aircrew Training
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform aircrew NATOPS, survival, SAR, Tactical, Weapons, and Sensor training
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Conduct NATOPS training exercises • Conduct water survival training exercises • Conduct land survival training exercises • Conduct survival first aid training exercises • Conduct airborne training exercises • Conduct air navigation training exercises • Conduct ship recognition training exercises • Conduct aircraft recognition training exercises • Conduct submarine recognition training exercises • Conduct aerial cardiopulmonary resuscitation (CPR) exercises • Conduct sea CPR exercises • Conduct aerial first aid exercises • Conduct warfare training exercises • Conduct search stores training exercises • Draw electronic system block diagrams (acoustic, non-acoustic, etc.)

<p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p>	<ul style="list-style-type: none"> • AFTTP 3-1 VOLUME 24 • AFTTP 3-1 VOLUME 2 • ATP-1 • AXP-1 • CVIS • DIAM 57-25 (Series) • FXP-1 • JOINT PUB 3-50.3 • NAVAIR 00-80T-101 • NAVAIR 00-80T-105 • NAVAIR 11-95M60-1 • NAVAIR 28-SSQ-500-1 • NAVAIR 28-SSQ-500-4 • NWP 3-22.5 SH60B • NWP 3-22.5 SH60F • NWP 3-50.3 • OPNAVINST 3710.7 (Series) • OPNAVINST 3750.6 • OPNAVINST 5100.19
<p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p>	<p>You can expect questions concerning NATOPS training; water and land survival procedures, aeromedical qualifications, general first aid procedures; aircraft, ship and submarine recognition; and Allied/Fleet training exercises</p>

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General AWH <i>Skill Area</i>	Aircrew Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Research and maintain tactical publication library Maintain acoustic libraries Maintain Enlisted Flight Time records
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Update acoustic signature databases • Update aviation warfare (AW) intelligence databases • Update AW electronic warfare databases • Conduct monthly flight hour audits • Prepare monthly flight hour summaries • Update flight time log books • Prepare enlisted personnel flight time summaries • Update enlisted personnel flight time summaries • Update contact logs • Research tactical publications • Update tactical publication libraries
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • BUPERSINST 1326.4 (Series) • BUMEDINST 5300.8 • DOD 7000.14R Volume 7A • NAVPERS 15560 • NWP 1-01 • OPNAVINST 3710.7 (Series)
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions	You can expect questions concerning the drafting and filing of daily flight schedules; requirements and procedures for auditing and tracking enlisted flight records; as well as

correctly:	research, maintenance of tactical publications, and maintaining acoustic libraries
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General AWH <i>Skill Area</i>	Environmental
A <i>skill</i> you are expected to perform from the General Skill Area above:	Determine sound characteristics Interpret environmental data and contour charts Solve ASW equations Interpret MAD operational effectiveness charts
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Update ocean temperature data bases • Evaluate environmental data • Calculate predicted transmission path ranges • Evaluate ocean bottom topography • Draw and label sound velocity profiles • Calculate Figure of Merit (FOM) • Evaluate MAD operational effectiveness (MOE) charts • Conduct and evaluate bathythermograph (BT) readings • Analyze sea surface temperature data
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NWP 3-22.5-SH60B • NWP 3-22.5-SH60F • ATP-28 • RP-33 • NAVAIR 28-SSQ-500-1 • NAVAIR 28-SSQ-500-4 • NAVOCEANCOMINST C3140.22 • ONI-1220-004-97
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions concerning the effects of environmental changes on acoustic and non-acoustic transmission paths, as well as MAD operational effectiveness charts

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General AWH <i>Skill Area</i>	Tactical/Mission Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Store and maintain aircraft recording media Maintain logs, charts, and publications Evaluate publications and messages
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Enter real-time and post-flight tactical data • Conduct flight crew brief and debriefs • Conduct post-flight analysis (PFA) • Prepare post operations mission wrap-ups • Calculate convergence zones locations, sizes and depths • Calculate direct target intercept paths • Calculate bottom bounce ranges • Classify sound transmission paths • Calculate acoustic ranges • Conduct BT sonobuoy drops • Analyze BT sonobuoy data • Transmit data link passive acoustic sonobuoy contacts • Calculate electronic warfare counter detection ranges • Analyze post-flight acoustic data • Perform battle damage assessments (BDA) • Upload and download mission tape recorders • Analyze post-flight tactical data

<p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p>	<ul style="list-style-type: none"> • ATP-28 • NAVAIR 28-SSQ-500-1 • NAVAIR 28-SSQ-500-4 • NWP 1-10.1 • NWP 1-10.22 VOL I • NWP 1-10.22 VOL II • NWP 1-10.26 • NWP 1-10.27 • NWP 3-13.1.13 • NWP 3-22.5-SH60B • NWP 3-22.5-SH60F • ONI-1220-004-97 • ONI 1259-001-00 • RP-33 • TM 3-21.1-98 • TM 3-21.3-98
<p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p>	<p>You can expect questions concerning equipment utilized to provide mission support, subject matter of specific tactical publications, maintenance of tactical publication libraries and updating/maintaining contact logs. Also, questions concerning handling of tactical data may be asked</p>

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General AWH <i>Skill Area</i>	Maintenance Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform aircraft servicing Perform aircraft daily and turnaround Conduct missing tool searches
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Troubleshoot tactical mission recorders • Service hydraulic systems • Fuel aircraft • Take aircraft fuel samples • Direct taxiing of aircraft • Wash aircraft • Perform daily aircraft inspections • Perform Turnaround aircraft inspections • Service engine lubrications systems • Service gearbox lubrications systems • Install blade crutches • Inventory aviation tools • Perform missing tool searches • Install sonobuoy launchers
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NAVAIR A1-H60BB-NFM-000 • NAVAIR A1-H60BB-NFM-010 • NAVAIR A1-H60CA-NFM-000 • NAVAIR A1-H60FB-NFM-010 • OPNAV 4790 VOL II (Series)
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions pertaining to normal day to day maintenance of aircraft, including turnaround inspections, daily inspections, aircraft washes, servicing aircraft and general aircraft flight preparations

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General AWH <i>Skill Area</i>	Communications
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform tactical communications
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Perform subsurface communications • Perform brevity codes communication • Perform radio circuit communications • Perform visual signals communications • Perform intercommunications systems (ICS) communications • Test communication systems • Restore lost communications • Perform secure communications • Perform nonsecure communications • Perform verbal contact reports • Perform data extractions • Classify subsurface-to-air pyrotechnic communications • Conduct data link transfers

<p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p>	<ul style="list-style-type: none"> • ACP-165 • APP-7A/MPP-7A • NAVAIR A1-H60BB-NFM-000 • NAVAIR A1-H-60BB-NFM-010 • NAVAIR A1-H60BB-NFM-110/C • NAVAIR A1-H60CA-NFM-000 • NAVAIR A1-H60FB-NFM-010 • NAVAIR00-80T-113 • NWP 1-01 • NWP 1-03.1 • NWP 1-03.41 (formerly NWP 10-1-12) • NWP 3-22.5-ASW TAC • NWP 3-22.5-SH60B • NWP 3-22.5-SH60F • NWP 6-02.1 • FXP-1
<p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p>	<p>You can expect questions concerning all aspects of radio communications, visual communications, and the use of various signaling devices</p>

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General AWH <i>Skill Area</i>	Passive Sonobuoy Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Carry out passive sonobuoy handling operations Conduct passive sonobuoy searches and localize passive sonobuoy contacts Monitor and assess weapons deployment using passive sensors
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Calculate closest point of approach (CPA) • Record surface and subsurface contact acoustic signatures • Classify radio frequency (RF) interference • Classify multi-target contacts • Determine target or non-target artifacts • Determine optimum sensor effectiveness • Tune passive sonobuoys • Hook passive bearing frequencies of interest • Identify passive contacts • Record passive acoustic data • Hook passive acoustic sonobuoy contacts • Calculate passive acoustic detection ranges • Calculate passive acoustic sonobuoy contact course, speed, and depth • Identify passive acoustic sonobuoy contacts CPA • Conduct passive acoustic sonobuoy searches • Track passive acoustic sonobuoy contacts • Analyze and classify passive acoustic sonobuoy contacts • Fix passive acoustic sonobuoy contacts • Transmit passive acoustic sonobuoy contact data • Employ passive sonobuoy tactics

<p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p>	<ul style="list-style-type: none"> • NAVAIR 28-SSQ-500-1 • NAVAIR 28-SSQ-500-4 • NAVAIR A1-H60BB-NFM-110/C • NAVAIR A1-H60CA-NFM-000 • NAVAIR A1-H60FB-NFM-010 • NWP 1-10.2 ,Vol I • NWP 1-10.22, Vol I • NWP 1-10.22, Vol II • NWP 1-10.26 • NWP 1-10.27 • NWP 1-10.21 • NWP 3-22.5-ASW SUPP • NWP 3-22.5-ASW TAC • NWP 3-22.5-SH60B • NWP 3-22.5-SH60F • ONI 122OH-002-94 • ONI 1259-001-00 • TM 3-21.1-98 • TM 3-21.3-98
<p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p>	<p>You can expect questions concerning virtually all aspects of passive operations, including search, localization, tracking, analysis and associated tactics</p>

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General AWH <i>Skill Area</i>	Active Sonobuoy Operations
<i>A skill</i> you are expected to perform from the General Skill Area above:	Conduct active sonobuoy searches Localize active sonobuoy contacts Classify active sonobuoy aural cues and non-target contacts
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Determine optimum active sonobuoy effectiveness • Identify active sonobuoy contacts • Record active acoustic data • Calculate active sonobuoy ranges • Determine active sonobuoy search depths • Track active sonobuoy contacts • Analyze active sonobuoy contacts • Classify active sonobuoy contacts • Classify active sonobuoy aural cues • Calculate active sonobuoy target course and speed • Classify active sonobuoy non-target contacts • Tune active sonobuoy • Display active sonobuoy data • Hook active contact bearings and ranges
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NAVAIR 28-SSQ-500-1 • NAVAIR A1-H60BB-NFM-110/C • NAVAIR A1-H60FB-NFM-010 • NAVAIR A2 H60CA-NFM-000 • NWP 3-22.5-ASW SUPP • NWP 3-22.5-ASW TAC • NWP 3-22.5-SH60B • NWP 3-22.5-SH60F
<i>Exam Expectations.</i> These are subject areas you should know to help you	You can expect questions concerning virtually all aspects of active operations, including search, localization, analysis, and associated

answer exam questions correctly.	tactics
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General AWH <i>Skill Area</i>	Dipping Sonar Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Conduct passive and active searches Localize passive and active contacts Monitor and assess weapons deployment using passive sensors Conduct BT temperature measurements

<p><i>Knowledge</i> you should have to perform this skill:</p>	<ul style="list-style-type: none"> • Calculate dipping sonar formulas • Determine optimum dipping sonar effectiveness • Calculate dipping sonar ranges • Perform dipping sonar BT measurements • Hook dipping sonar contacts • Analyze dipping sonar contacts • Identify dipping sonar phenomena • Classify dipping sonar contacts • Interpret dipping sonar Doppler information • Fix dipping sonar contacts • Track dipping sonar contacts • Identify dipping sonar contact maneuvers • Calculate dipping sonar contact courses and speeds • Track weapons deployment • Calculate dipping sonar counter detection ranges • Adjust sonar reeling machines • Classify multipurpose recorder target traces • Calculate optimum sonar transducer search depths • Conduct active sonar searches • Record sonar contacts (active, passive) • Classify aural cues (active, passive) • Calculate sonar equations (active, passive)
<p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p>	<ul style="list-style-type: none"> • NAVAIR A1-H60CA-NFM-000 • NAVAIR A1-H60FB-NFM-010 • NWP 3-21.69.1 • NWP 3-22.5-ASW SUPP • NWP 3-22-5-ASW TAC • NWP 3-22.5-SH60F • RP-33

<p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p>	<p>You can expect questions concerning virtually all aspects of active, passive, and BT operations, including search, localization, analysis, and associated tactics</p>
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General AWH <i>Skill Area</i>	Radar/ISAR and Navigation Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Convert between true, relative and magnetic bearings Perform weather avoidance radar navigation Conduct radar searches Perform Identification Friend or Foe (IFF) interrogations
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Calculate radar formulas • Convert true bearings • Convert relative bearings • Convert magnetic bearing • Analyze radar contacts • Classify radar contacts • Vector aircraft • Perform navigational updates
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NAVAIR A1-H60BB-NFM-000 • NAVAIR A1-H60BB-NFM-010 • NAVAIR A1-H60BB-NFM-110/C • NAVPERS 18068F • NEETS Module 18 • NWP 3-22.5-ASW SUPP • NWP 3-22.5-ASW TAC • NWP 3-22.5-SH60B
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions pertaining to environmental effects, theory, equipment, and tactics

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General AWH <i>Skill Area</i>	Electronic Warfare Support (ES) Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Conduct ES searches Plot, fix, and track ES contacts
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Determine optimum ES effectiveness • Calculate ES ranges • Conduct ES searches • Modify ES libraries • Analyze ES contacts • Plot ES contacts • Fix ES contacts • Track ES contacts • Calculate ES target courses and speeds • Compute ES contact intercepts • Record ES parameters
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NAVAIR A1-H60BB-NFM-110/C • NAVAIR A1-H60FB-NFM-010 • NWP 1.10.1 • NWP 3-13.1.13 • NWP 3-22.5-ASW SUPP • NWP 3-22.5-ASW TAC • NWP 3-22.5-HH60H VOL I • NWP 3-22.5-HH60H VOL II • NWP 3-22.5-SH60B
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions pertaining to ES theory, environmental effects, equipment, and tactics

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General AWH <i>Skill Area</i>	MAD Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Deploy and recover MAD Fix and track MAD contacts Compute course and speed of MAD contacts
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Calculate MAD formulas • Determine optimum MAD effectiveness • Hook MAD contacts • Analyze MAD contacts • Classify MAD contacts • Fix MAD contacts • Track MAD contacts • Calculate MAD slant ranges • Compute target depths • Identify MAD course maneuvers • Identify MAD noises • Filter out MAD noises • Calculate MAD contact courses and speeds • Perform Operational Figure of Merit (OFOM) • Perform MAD compensations • Deploy MAD • Recover MAD
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NAVAIR A1-H60BB-NFM-110/C • NWP 3-22.5-ASW SUPP • NWP 3-22.5-ASW TAC • NWP 3-22.5-SH60B

<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions pertaining to MAD theory, equipment, operations, deployment, recovery, tactics and MOE charts
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General AWH <i>Skill Area</i>	Special Mission Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Identify, evaluate, and report visual contacts Conduct visual searches Conduct photographic operations Conduct special mission exercises
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Perform aircrew hostile environment training (HET) exercises • Rig fast ropes • Rig rappelling ropes • Conduct special warfare personnel insertions and extractions • Conduct helicopter visit boarding search and seizure (HVBSS) • Conduct mine countermeasures searches • Conduct drug interdiction searches • Load intelligence gathering cameras • Perform visual searches • Set up vision enhancement equipment • Don vision enhancement equipment • Classify visual contacts • Estimate sea states • Perform photographic riggings • Take aerial combat target photographs • Update photographic rig logs • Calculate visual search altitudes (CSAR) operations

<p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p>	<ul style="list-style-type: none"> • AFTTP 3-1 VOLUME 24 • AFTTP 3-1 VOLUME 2 • CVIS • DIAM 57-25 (Series) • NAVAIR A1-H60BB-NFM-000 • NAVAIR A1-H60CA-NFM-000 • NAVAIR A1-H60FB-NFM-010 • NWP 3-04.1 • NWP 3-22.5-HH60H VOL I • NWP 3-22.5-HH60H VOL II • NWP 3-22.5-SH60B • NWP 3-22.5-SH50F
<p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p>	<p>You can expect questions concerning visual search procedures, including crew coordination, equipment utilization, basic appearance groups, and tactics and procedures for conducting special missions.</p>

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General AWH <i>Skill Area</i>	Search/Kill Stores Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform search/kill stores handling and loading Perform small arms handling, maintenance Conduct in-flight gunnery operations
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Prepare load sheets • Verify search stores tableaux • Disassemble, inspect, clean, lubricate and assemble small arms • Time small arms • Mount small arms • Perform small arms barrel changes • Monitor weapons deployment • Classify active emissions • Set search stores • Unload search stores • Arm search stores • Launch search stores • Load and unload kill stores • Track ordnance expenditures • Program weapon station stores (torpedoes) • Conduct antisubmarine warfare (ASW) search stores inventory • Procure ASW search stores • Load and unload aircraft-mounted small arms

<p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p>	<ul style="list-style-type: none"> • NAVAIR 11-95M60-1 • NAVAIR 28-SSQ-500-1 • NAVAIR 28-SSQ-500-4 • NAVAIR A1-H60CA-NFM-000 • NAVAIR A1-H60BB-NFM-010 • NWP 3-22.5-ASW SUPP • NWP 3-22.5-ASW TAC • NWP 3-22.5-HH60H VOL 1 • NWP 3-22.5-SH60B • NWP 3-22.5-SH60F
<p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p>	<p>You can expect questions concerning individual specifications of search/kill stores and search/kill stores handling, loading, and unloading; as well as questions concerning individual specifications of small arms weapons and utilization of small arms weapons</p>

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General AWH <i>Skill Area</i>	Search and Rescue (SAR)/Combat Search and Rescue (CSAR)
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform SAR/CSAR procedures Conduct MEDEVAC evolutions Inspect aviation life support equipment
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Mark survivor locations • Deploy SAR kits • Perform rescue swimmer equipment inspections • Perform downed pilot authentication's • Deploy rescue swimmers • Vector rescue units • Initiate SAR swimmer visual communications • Prepare survivors for transport • Rig aircraft for rescues • Recover survivors and swimmers • Conduct SAR medical evacuations (MEDEVAC) • Deploy collapsible MEDEVAC litters • Assemble and disassemble collapsible litters • Inspect and install aviation life support systems (ALSS) dye markers • Inspect and install ALSS signaling kits • Inspect and install ALSS signal flares • Inspect and install ALSS distress lights • Inspect and install ALSS survival vests • Inspect and install ALSS survival knives • Inspect and install ALSS shroud line cutters • Conduct aircraft mounted first aid kit inventories • Inspect and refill helicopter emergency escape device (HEEDS) bottles

	<ul style="list-style-type: none"> • Inspect and clean rescue harness • Inspect and clean survival slings • Inspect forest penetrators • Perform survival radio and beacon functional checks • Set SAR alert conditions • Perform CSAR survivor interrogations
<p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p>	<ul style="list-style-type: none"> • AFTTP 3-1 VOLUME 1 • AFTTP 3-1 VOLUME 2 • AFTTP 3-1 VOLUME 24 • JOINT PUB 3-50 • JOINT PUB 3-50.1 • JOINT PUB 3-50.2 • JOINT PUB 3-50.21 • JOINT PUB 3-50.3 • NAVAIR A1-H60CA-NFM-000 • NWP 3-04.1 • NWP 3-22.5-HH60H VOLUME II • NWP 3-22.5-SH60F • NWP 3-50.1 • NWP 3-50.22 • NWP 3-50.3 • OPNAVINST 3130.6 (Series)
<p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p>	<p>You can expect questions concerning all aspects of SAR/CSAR training, mission planning, briefing, procedures, tactics, equipment, equipment maintenance, communications and first aid for both over-water and over-land SAR/CSAR</p>

Part 2

Advancement Handbook for AWH2

Advancement Handbook for AWH2

General AWH <i>Skill Area</i>	Aircrew Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Administer NATOPS programs
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Administer NATOPS programs • Update NATOPS training jackets
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • OPNAVINST 3750.6 • OPNAVINST 3710.7 (Series) • OPNAVINST 5100.19
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions concerning the maintenance and verification of NATOPS training jackets, and the flight evaluation program

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General AWH <i>Skill Area</i>	Environmentals
A <i>skill</i> you are expected to perform from the General Skill Area above:	Update acoustic and non-acoustic environmental databases
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Update environmental databases
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NAVAIR 28-SSQ-500-4 • NAVOCEANCOMINST C3140.22 • NWP 3-22.5-ASW TAC • NWP 3-22.5-SH60B • NWP 3-22.5-SH60F • RP-33
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions concerning all aspects of acoustic and non-acoustic environmental databases in support of pre-flight, in-flight, and post-flight, and mission reconstruction

Advancement Handbook for AWH2

General AWH <i>Skill Area</i>	Tactical/Mission Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain tactical publications library Enter flight data into tactical databases
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Update acoustic contact history records • Conduct data transfers (tactical, non-tactical, etc.) • Conduct SAR swimmer briefs • Conduct SAR mission planning • Perform tactical mission reconstructions
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • AXP-1 • FXP-1 • JOINT PUB 3-50 • JOINT PUB 3-50.1 • NWP 1-01 • NWP 1-03.41 (formerly NWP 10-1-12) • NWP 3-22.5 SH60 B • NWP 3-22.5 SH60 F • NWP 3-50.1 • OPNAVINST 3130.6 • SECNAVINST 5510.30A • SECNAVINST 5510.36
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions concerning maintenance of tactical publications libraries and mission support, including mission wrap-ups and reconstruction

Advancement Handbook for AWH2

General AWH <i>Skill Area</i>	Communications
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform tactical communications
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Load crypto codes • Operational Brevity Words
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • ACP 165 • APP-7A/MPP-7A • NAVAIR A1-H60BB-NFM-000 • NAVAIR A1-H60CA-NFM-000 • NWP 3-22.5-ASW TAC • NWP 3-22.5-SH60B • NWP 3-22.5-SH60F • NWP 6-01 • NWP 6-02.1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions concerning tactical communications and reports in an operational environment.

Advancement Handbook for AWH2

General AWH <i>Skill Area</i>	Radar/ISAR and Navigation Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Conduct Inverse Synthetic Aperture Radar (ISAR) pre-flights Convert between true, relative, and magnetic bearings Perform weather avoidance radar navigation Perform Identification Friend or Foe (IFF) interrogations Conduct radar searches
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Fix radar contacts • Track airborne and sea radar contacts • Calculate radar contact courses and speeds • Perform Identification Friend or Foe (IFF) interrogations • Conduct radar searches • Perform weather avoidance radar navigations • Conduct over-the-horizon targeting
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NAVAIR A1-H60BB-NFM-000 • NAVAIR A1-H60BB-NFM-010 • NAVAIR A1-H60BB-NFM-110 (C) • NWP 3-22.5-ASW TAC • NWP 3-22.5-SH60B
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions concerning all aspects of radar/IFF operations, including optimum equipment effectiveness and tactics

Part 3

Advancement Handbook for AWH1

Advancement Handbook for AWH1

General AWH <i>Skill Area</i>	Training Management
A <i>skill</i> you are expected to perform from the General Skill Area above:	Establish and maintain aircrew training programs Conduct training Evaluate effectiveness of training Coordinate aircraft safety and inspection programs
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Establish aircrew training programs • Update aircrew training programs • Evaluate aircrew training programs effectiveness • Coordinate aircrew qualification and readiness programs • Update aircrew qualification and readiness programs • Evaluate aircrew qualification and readiness programs • Evaluate sensor operator proficiencies • Perform NATOPS testing • Coordinate NATOPS check rides
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • OPNAVINST 3130.6 • OPNAVINST 3710.7 (Series) • OPNAVINST 3750.6 • OPNAVINST 5100.19 • NAVPERS 15909F • NAVPERS 18068F
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions concerning all aspects of aircrew training, including NATOPS program coordination, sensor operator proficiency, and aircrew qualifications and proficiency

Advancement Handbook for AWH1

General AWH <i>Skill Area</i>	Aircrew Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Update SAR records
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Update SAR records
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • DOD 7000.14R VOLUME 7A • NWP 3-50.1 • OPNAVINST 3130.6 • OPNAVINST 3710.7 (Series)
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions pertaining to all aspects of SAR records

Advancement Handbook for AWH1

General AWH <i>Skill Area</i>	Tactical Mission Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Carry out mission pre-flight support duties Carry out mission in-flight support duties Carry out mission post-flight support duties
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Plan tactical missions • Establish AW tape management program
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • AFTTP 3-1 VOLUME 1 • AFTTP 3-1 VOLUME 2 • AFTTP 3-1 VOLUME 24 • ATP-1 • AXP-1 • FXP-1 • JOINT PUB 3-20.2 • JOINT PUB 3-50.21 • JOINT PUB 3-50.3 • NWP 3-22.5-ASW SUPP • NWP 3-22.5-ASW TAC • NWP 3-22.5-HH60H VOL 1 • NWP 3-22.5-HH60H VOL II • NWP 3-22.5-SH60B • NWP 3-22.5-SH60F • RP-33 • TM 3-21.1-98 • TM 3-21.3-98
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions concerning mission support duties, including tactical mission planning

Advancement Handbook for AWH1

General AWH <i>Skill Area</i>	Radar/Navigation Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Conduct over-the-horizon detection classifications
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Conduct over-the-horizon detection classifications
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NAVAIR A1-H60BB-NFM-000 • NWP 3-22.5-ASW TAC • NWP 3-22.5-SH60B
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions concerning over-the-horizon detection classifications

Part 4

Advancement Handbook for AWC

Candidates for advancement to AWC are responsible for all skills and knowledges for the AWA, AWH, and AWN ratings at the E-4, E-5 and E-6 paygrade levels. Refer to the Advancement Handbook for each rating for this information and for exam references.

Appendix 1

References Used in This Advancement Handbook

Short Title	Long Title	Stocking Point
ACP-165	Operational Brevity Codes	Notes 1 & 12
AFTTP 3-1Volume 2	Air Force Tactics, Techniques, and Procedures 3-1 Volume 2, Threat Reference Guide and Countertactics	Notes 16, & 17
AFTTP 3-1Volume 24	Air Force Tactics, Techniques, and Procedures 3-1 Volume 24, Tactical Employment HH-60G	Notes 16 & 17
APP-7A/MPP-7A	Joint Publication Brevity Words	Notes 4 & 12
ATP-28	Allied Submarine Warfare Manual	Notes 1 & 12
AXP-1	Allied Submarine and Antisubmarine Exercise Manual	Notes 1 & 12
BUPERSINST 1326.4 (Series)	Administration of Enlisted Flight Orders	Note 7
BUPERSINST 1610.10 (Series)	Navy Performance Evaluation and Counseling System	Note 7
CVIS	Combat Visual Identification System (CVIS)	Note 15
DIAM 57-25 (Series)	Recognition Guides	Note 6
DOD 7000.14R VOLUME 7A	Financial Management Regulation, Chs 8 & 22	Notes 8 & 9
EPL	Emitter Propagation Library	Note 14
FXP-1	Antisubmarine Warfare (ASW) Exercises	Notes 4 & 12
JOINT PUB 3-50	National Search and Rescue Manual, Vol. I: National Search and Rescue System	Note 10
JOINT PUB 3-50.1	National Search and Rescue Manual, Vol. II: Planning Handbook	Note 10
JOINT PUB 3-50.2	Doctrine for Joint Combat Search and Rescue	Note 10

JOINT PUB 3-50.21	Joint Tactics, Techniques, and Procedures for Combat Search and Rescue	Note 10
JOINT PUB 3-50.3	Joint Doctrine for Evasion and Recovery	Note 10
NAVEDTRA 172-18-00-98	Navy Electricity and Electronic Training Series (NEETS) Module 18	Note 1
NAVAIR 00-80T-101	NATOPS Survival Manual	Note 1
NAVAIR 00-80T-105	CV NATOPS Manual	Note 1
NAVAIR 00-80T-113	Aircraft Signals NATOPS Manual	Note 1
NAVAIR 11-95M60-1	Organizational and Intermediate Maintenance with Illustrated Parts Breakdown 7.62-mm Aircraft Machine Gun, M60	Note 1
NAVAIR 28-SSQ-500-1	Sonobuoy Technical Reference Manual	Note 1
NAVAIR 28-SSQ-500-4	Basic Introduction to Air ASW Acoustic Systems	Note 1
NAVAIR A1-H60BB-NFM-000	NATOPS Flight Manual SH-60B Aircraft	Note 1
NAVAIR A1-H60BB-NFM-010	LAMPS MK III Weapon System Manual	Note 1
NAVAIR A1-H60BB-NFM-110/(C)	SH-60B Aircraft Weapon System Manual Supplement(U)	Note 3
NAVAIR A1-H60CA-NFM-000	NATOPS Flight Manual SH-60F Aircraft	Note 1
NAVAIR A1-H60FB-NFM-010	SH-60F Air Subsystem Operators Manual	Note 1
NAVOCEANCOMINST C3140.22	Tactical Support Products Manual	Note 3
NWP 1-01	Naval Warfare Publication System	Note 4
NWP 1-03.1	Operational Reports	Note 4
NWP 1-10.1	Tactical Action Officer Handbook	Note 4
NWP 1-10.2, Vol. I	Principles of Lofargram Analysis	Note 4
NWP 1-10.21	Foreign Submarine Data Handbook	Note 4
NWP 1-10.22, Vol. I	Passive Acoustic Classification Reference Manual	Note 4

NWP 1-10.22, Vol. II	Passive Acoustic Classification Reference Manual-Pocket Guide	Note 4
NWP 1-10.26	Signature Catalog: CIS Diesel and Nuclear Submarines	Note 4
NWP 1-10.27	U.S. Nuclear Submarine Data Handbook	Note 4
NWP 1-03.41 (formerly NWP 10-1-12)	Maritime Reporting System	Notes 4 & 12
NWP 3-04.1	Helicopter Operating Procedures for Air-Capable Ships	Note 4
NWP 3-13.1.13	Electronic Warfare Coordination	Note 4
NWP 3-21.69.1	Submarine SONAR Reference Manual (Chs 9, 10, and 12)	Notes 4 & 12
NWP 3-22.5-ASW SUPP	Air ASW Supplement	Note 1
NWP 3-22.5 ASW TAC	Air ASW Tactical Airborne Information Document (Air ASW TACAID)	Note 1
NWP 3-22.5 HH60H VOL I	HH-60H Aircraft Tactical Manual	Note 1
NWP 3-22.5 HH60H VOL II	HH-60H Tactical Manual, Vol II	Note 1
NWP 3-22.5 SAR TAC	Navy Search and Rescue Tactical Information Document (SAR TACAID)	Note 1
NWP 3-22.5 SH60B	SH-60B Aircraft Tactical Manual	Note 1
NWP 3-22.5 SH60F	SH-60F Aircraft Tactical Manual	Note 1
NWP 3-50.1	Navy Search and Rescue (SAR) Manual	Notes 4 & 12
NWP 3-50.22	Navy Combat Search and Rescue (SAR) Manual Supplement	Notes 4 & 12
NWP 3-50.3	Multiservice Procedures for Survival, Evasion and Recovery	Notes 4 & 12
NWP 3-55.32.1	Integrated Undersea Surveillance System Coordination Procedures	Notes 4 & 12
NWP 6-01	Basic Operational Communication Doctrine	Notes 4 & 12

NWP 6-02.1	Multiservice Air-Air, Air-Surface, Surface-Air Brevity Words	Notes 4 & 12
ONI-1220-004-97		Note 6
ONI-1259-001-00	Acoustic Intelligence (ACINT) Collection Guide (ASW AIRCRAFT)	Note 6
OPNAVINST 3130.6 (Series)	Naval Search and Rescue (SAR) Standardization Program	Note 2
OPNAVINST 3710.7	NATOPS General Flight and Operating Instructions	Notes 2 & 4
OPNAVINST 3750.6 (Series)	Naval Aviation Safety Program	Note 2
OPNAVINST 4790.2 Vol. II	Navy Aviation Maintenance Program (NAMP)	Note 2
OPNAVINST 5100.19	Naval Occupational Safety and Health Program Manual for Forces Afloat	Note 2
RP-33	Fleet Oceanographic and Acoustic Reference Manual	Note 5
SECNAVINST 5510.30A	Department of the Navy Personnel Security Program	Note 2
SECNAVINST 5510.36	Department of the Navy (DON) Information Security Program (SP) Regulation	Note 2
TM 3-21.1-98	Commander's Handbook for Coordinated Undersea Warfare (USW) Tactics in the U.S. Naval Forces Central Command (NAVCNET) AOR	Notes 4 & 12
TM 3-21.3-98	Maritime Action Group (MAG) Commander's Handbook for Coordinated USW in the Korean Littoral	Notes 4 & 12
ONI-1220H-002-94	Submarine Warfare Tactics Handbook	Note 6
OPNAVINST 5100.23	Navy Occupational Safety and Health and Hazardous Materials Control Program Manual	Note 2
BUMEDINST 5300.8	Disposition of Rehabilitated Alcohol Dependent or Abuse Aircrew	Note 13

NAVPERS 15560	Naval Military Personnel Manual, Articles 1050305, 1410240, 2620150, 2620300, 6610140, 6610160	Note 7
NAVPERS 15909F	Enlisted Transfer Manual (Article 9.12)	Note 7
NAVPERS 18068F	Navy Enlisted Occupational Standards Volume I and II	Note 7
NWP 1-03.1	Operational Reports	Note 4
AFTTP 3-1 VOLUME 1	Air Force Tactics, Techniques, and Procedures 3-1 Volume 1, General Planning and Employment Considerations	Notes 16 & 17

LEGEND:

- Note 1 — To order, MILSTRIP to NAVICP PHILA or via INTERNET <http://www.nll.navsup.navy.mil>, use most current edition, consult NAVEDTRA 12061 Catalog of nonresident training courses for stock numbers.
- Note 2 — Available via INTERNET <http://www.nll.navsup.navy.mil> or <http://neds.nebt.daps.mil>
- Note 3 — Letter request to Commander, Navy Meteorology and Oceanography Command, 1020 Balch Boulevard, Stennis Space Center, MS 39529-5005
- Note 4 — NTIC Series B1 CD-ROMs (See your command NWP Custodian) or MILSTRIP to NAVICP PHILA
- Note 5 — National Imagery & Mapping Agency (NIMA), CATP2V01U
- Note 6 — Requests should be made via validating type commander and directed to Commander, Naval Intelligence Command (Attn: NIC-522), 4600 Suitland Road, Washington, D.C. 20389-5000
- Note 7 — Internet – <http://www.bupers.navy.mil/>
- Note 8 — Internet – <http://web7.whs.osd.mil/corres.htm/>
- Note 9 — Internet – <http://www.dtic.mil/comptroller/fmr/>
- Note 10 — Internet – <http://www.dtic.mil/doctrine/jel/index.html>
- Note 11 — Milstrip to NAVICP PHILA (Stk no. from NAVSUP p2002).
- Note 12 — See your command NWP Custodian
- Note 13 — Internet – <http://support1.med.navy.mil/bumed/>
- Note 14 — National Security Agency (W9M3)
Attn: Ronald Hamby
Fort George G Meade, Maryland 20755-6000
Comm ph: 301-688-3155
- Note 15 — NAWC
Code 34201E
Point Mugu, CA 92042-5001
DSN 351-7918

Note 16 — 57 WG/DTW
4390 England Avenue
Nellis AFB, NV 89191-6507
DSN 682-3421

Note 17 — SIPRNET
<http://aftp3-1.nellis.af.smil.mil/> or
<http://204.20.177.170/>